

DoD Pest Management Training and Certification

April 1997

Office of the Deputy Under Secretary of Defense
for Acquisition and Technology

FOREWORD

This Manual is issued under the authority of DoD Instruction 4150.7, “DoD Pest Management Program,” April 22, 1996. It prescribes procedures on DoD pest management training and certification of pesticide applicators.

This Manual applies to the Office of the Secretary of Defense, the Military Departments (including the Coast Guard when it is operating as a Military Service in the Navy), the Chairman of the Joint Chiefs of Staff, the Combatant Commands, the Inspector General of the Department of Defense, the Defense Agencies, and the DoD Field Activities, including any other integral DoD organizational entity or instrumentality established to perform governmental function (hereafter referred to collectively as “the DoD Components”). The term “Military Services” as used herein, refers to the Army, the Navy, the Air Force, and the Marine Corps.

This Manual is effective immediately and is mandatory for use by all DoD Components. The Heads of the DoD Components may issue supplementary instructions only when necessary to provide unique requirements within their organizations. Supplementary DoD Component instructions shall not be less restrictive than those in this Manual.

Send recommended changes to the Manual to:

Deputy Under Secretary of Defense (Environmental Security)
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REFERENCES

- (a) DoD Instruction 4150.7, "DoD Pest Management Program," April 22, 1996
- (b) DoD 4150.7-P, "DoD Plan for Certification of Pesticide Applicators," September 1996, authorized by DoD Instruction 4150.7, April 22, 1996
- (c) Section 136 et seq. of title 7, United States Code
- (d) Title 40, Code of Federal Regulations, Part 171, "Certification of Pesticide Applicators," current edition
- (e) Federal Register, Volume 42, page 41097, August 19, 1977
- (f) DoD Instruction 4715.10, "Environmental Education, Training and Career Development," April 24, 1996

DEFINITIONS

1. Certifying Official. Professional DoD pest management personnel designated, in writing by the Components to the Executive Director, Armed Forces Pest Management Board (AFPMB), who review and certify that qualifications of DoD pesticide applicators meet the DoD standards in DoD Instruction 4150.7 and DoD 4150.7-P (references (a) and (b)), and this Manual.
2. Direct Supervision. Supervision that includes being at the specific location where pest management work is conducted; providing instruction and control; and maintaining a line-of-sight view of the work performed. Certain circumstances may temporarily remove the line-of-sight view of the application of pesticide from the supervisor such as topographic constraints, vegetation constraints, or building structural constraints. Under those temporary circumstances, the supervisor shall be responsible for the actions of pesticide applicators. (See “Uncertified Installation Pesticide Applicator,” definition 7.e., below.)
3. DoD Employee. Federal employees of the Department of Defense, to include members of the State National Guard when activated for Federal duty. For this Manual, that term does not include employees involved in civil works of the Army Corps of Engineers.
4. DoD Pest Management Program. A single and comprehensive program that encompasses all pest management activities of the Department of Defense.
5. Integrated Pest Management (IPM). A planned program, incorporating continuous monitoring, education, recordkeeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, materiel, or the environment. IPM uses targeted and sustainable (effective, economical, and environmentally sound) methods including education, habitat modification, biological control, genetic control, cultural control, mechanical control, physical control, regulatory control, and where necessary, the judicious use of least-hazardous pesticides.
6. Pesticide. Any substance or mixture of substances, including biological control agents, that may prevent, destroy, repel, or mitigate pests and are specifically labeled for use by the U.S. EPA. Also any substance or mixture of substances used as a plant regulator, defoliant, desiccant, disinfectant, or biocide. (See “Restricted Use Pesticide,” definition 11., below.) (The AFPMB does not review or approve disinfectants or biocides).
7. Pesticide Applicator. Any individual who applies pesticides or supervises the use of any pesticide by others.
 - a. Certified Pesticide Applicator. Any individual who applies pesticides or supervises the use of pesticides, and who has been authorized to do so by successfully completing a training program approved by the EPA followed by formal certification by the Department of Defense or a State or for OCONUS, subsection B.5., of reference (a).
 - b. DoD-Certified Pesticide Applicator. Military or civilian personnel certified in accordance

with DoD Instruction 4150.7 (reference (b)) or Non-FIFRA certification, Appendix D of this Manual, and certified in the category in which a pesticide shall be applied.

c. Installation Pesticide Applicator. DoD employees or contract personnel whose job responsibilities involve the application of pesticides on DoD installations and property.

d. State-Certified Pesticide Applicator. Persons certified in accordance with the “Federal Insecticide, Fungicide, and Rodenticide Act” (FIFRA) (7 U.S.C. 136 et seq., reference (c)), by a State with an EPA-approved certification plan and certified in the category in which a pesticide shall be applied.

e. Uncertified Installation Pesticide Applicator. DoD employees who are not certified under the DoD Plan (reference (b)) or State plan during an apprenticeship period not exceeding 2 years and who must apply pesticides under the supervision of a DoD- or State-certified applicator.

8. Pest Management Consultant (PMC). Professional DoD pest management personnel located at DoD Component Headquarters, field operating Agencies, major commands, facilities engineering field divisions or activities, or area support activities, who provide technical and management guidance for the conduct of installation pest management operations. Some PMCs may be designated by the DoD Component’s as “certifying officials.”

9. Pests. Arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

10. Professional Pest Management Personnel (PPMP). DoD Military officers commissioned in the Medical Service or Biomedical Sciences Corps, or DoD civilian personnel with college degrees in biological or agricultural sciences who are in a current assignment that includes pest management responsibilities exercised regularly. DoD civilian employees also shall meet Office of Personnel Management (OPM) qualification standards. Based on assignment position, some PPMPs are pest management consultants.

11. Restricted Use Pesticide. A pesticide that the Administrator of the EPA, in accordance with reference (c), or a State regulatory Agency determines to have the potential to cause unreasonable adverse effects on the environment or human health, when applied, in accordance with its directions for use, and therefore, requires additional regulatory restrictions.

12. State. Any one of the 50 United States of America, the District of Columbia, the Commonwealths of Puerto Rico, the Northern Marianas, and the Virgin Islands, and the Territories of Guam and American Samoa.

ABBREVIATIONS AND/OR ACRONYMS

AFPMB	Armed Forces Pest Management Board
AI	Active Ingredient
BASH	Bird Air Strike Hazard
CFR	Code of Federal Regulations
CONUS	Continental United States
DoD	Department of Defense
DoI	Department of the Interior
EPA	U. S. Environmental Protection Agency
FGS	Final Governing Standards
FIFRA	“Federal Insecticide, Fungicide, and Rodenticide Act” (7 U.S.C. 136 <u>et seq.</u> , reference (c))
FSTT	Field Sanitation Team Training
IPM	Integrated Pest Management
lbs	Pounds
lbs/ac	Pounds per acre
lbs/gal	Pounds per gallon
mg/kg	Milligrams per kilogram
Non-FIFRA	Country and/or Territory that is not under the jurisdiction of FIFRA (reference (c))
OCONUS	Outside the Continental United States
OEBGD	Overseas Environmental Base Line Guidance Document
OJT	On-the-job-training
OPM	Office of Personnel Management
OSD	Office of the Secretary of Defense
PMC	Pest Management Consultant
PMQAE	Pest Management Quality Assurance Evaluator
PPMP	Professional Pest Management Personnel
SOFA	Status of Forces Agreement
sq. ft.	Square Feet
SSN	Social Security Number
TWP	Treated Wood Products
ULV	Ultra Low Volume
USAF	United States Air Force
USAFSAM	United States Air Force School of Aerospace Medicine
USAFSAM/PH	United States Air Force School of Aerospace Medicine, Public Health
U.S.C.	United States Code
VA	Department of Veterans Affairs
WRAMC	Walter Reed Army Medical Center

CHAPTER 1

GENERAL INFORMATION

A. SCOPE

1. This Manual outlines the DoD Pest Management Training Program. It is not intended to conflict with, be used instead of, or supersede other DoD training Directives or OPM Qualification Standards. The DoD Pest Management Training Program includes DoD 4150.7-P, as required by FIFRA (7 U.S.C. 136 et seq.); 40 C.F.R. Part 171; and 42 FR 41907 (references (b) through (e)). Report any conflicts to the Armed Forces Pest Management Board (AFPMB), Forest Glen Section, Walter Reed Army Medical Center, Washington, DC 20307-5001.

2. This Manual describes the DoD Pest Management Training Program, except for reference (b). This Manual establishes recommended training to meet pest management requirements.

B. PURPOSE

The purpose of this Manual is to establish training goals, provide a uniform training process, training standards, and procedures to prepare DoD pest management personnel to meet DoD pest management policy objectives, as stated in DoD Instruction 4150.7 (reference (a)). This Manual supports DoD policy to maintain safe, efficient, and environmentally sound integrated pest management programs. It promotes prevention and control of pests that may adversely impact readiness or military operations by affecting the health of personnel or damaging structures, materiel, and/or property as established under reference (a).

C. DEFINITIONS

See the "Definitions" section of this Manual.

D. APPLICABILITY

1. This Manual is the Agency plan for the Department of Defense and applies to DoD employees applying any pesticides on DoD land or property under DoD jurisdiction. In the infrequent instances when DoD employees shall be applying pesticides on other property, they shall work under the supervision of a designated certified pesticide applicator. Terms used in this Manual that are unique to the military pest management program, are defined in the "Definitions" section.

2. This Manual does not apply to pesticide applicators working under the purview of the civil works functions of the Department of the Army, facilities occupied by Component activities when real property control is under another Component or Government Agency, and State-owned and State-operated (funded) installations or facilities that the National Guard uses part-time or full time.

E. OBJECTIVES

The DoD Pest Management Training and Pesticide Applicator Certification Program objectives are to do the following:

1. Promote and support the following:
 - a. Military readiness.
 - b. Installation program planning and maintenance.
 - c. Pollution prevention, conservation of natural resources and environmental compliance.
 - d. IPM.
2. Provide well trained, and technically competent pest management personnel.
3. Meet or exceed local, State, and Federal regulatory pesticide applicator training requirements.
4. Promote continuing education and professional development of DoD pest management personnel.

F. RESPONSIBILITIES

1. The AFPMB, as designated by the Under Secretary of Defense for Acquisition and Technology (USD (A&T)) through the Deputy Under Secretary of Defense for Environmental Security (DUSD (ES)), in DoD Instruction 4150.7 (reference (a)), has overall responsibility for the following:
 - a. Policy guidance, scientific advice and coordination for DoD pest management training and pesticide applicator certification.
 - b. Technical guidance for pest management training and the pesticide applicator certification program through the senior consultants of each Component.
2. The Secretaries of the Military Departments and the Heads of the DoD Components, including the Directors of Defense Agencies, in accordance with reference (a), shall:
 - a. Establish and maintain training and pesticide applicator certification programs that conform to policy, procedures, and requirements specified in this Manual. Areas of emphasis shall include IPM techniques as a means to reduce pesticide risk (e.g., reduce pesticide use, reduce exposure, and promote environmental compliance); oversight of DoD pest management training; and accurate and complete reporting and recordkeeping for pest management training and pesticide applicator certification.

- b. Implement IPM in Component pest management training.
- c. Designate qualified PMCs to oversee pest management training.
- d. Cooperate with local, State, Federal and host-nation government agencies involved with pest management training and certification of pesticide applicators to meet regulatory requirements.

G. PEST MANAGEMENT PROGRAM PERSONNEL

Civilian and military personnel that require specialized pest management training include the following:

1. PPMPs. PPMPs include DoD civilian, DoD contract employees, and military personnel with college degrees in biological or agricultural sciences. They provide technical guidance and program oversight for DoD or Components pest management programs. Certain positions; e.g., certifying official, and PMC shall only be filled by PPMPs. PPMPs shall be certified as “pesticide applicators” if they advise, apply pesticides or recommend pest control measures that involve commercial application of pesticides. Military personnel and civilian specialists, as defined in the “Definitions” section of this Manual, shall include PMCs, educators, and researchers.
2. Pest Management Coordinators. “Pest management coordinators,” designated by the installation commander, provide oversight for pest management functions at the installation level. Pest management coordinators shall be certified “pesticide applicators” if their job responsibilities require them to apply or supervise the use of pesticides.
3. Shop Supervisors. Supervisors direct pest management operations at the installation level. Supervisors have dual roles with part time responsibilities for both supervision and pesticide application. Supervisors of installation pest management programs shall be DoD-certified pesticide applicators. (See also “Pesticide Applicators,” in subsection G.4., below.)
4. Pesticide Applicators. Pesticide applicators, military and civilian, are the working level pest management personnel at military installations who apply pesticides and perform other pest management operations. Pesticide applicators shall be DoD- or State-certified pesticide applicators. Pesticide applicators are defined in the “Definitions” section of the Manual.
5. PMQAE. PMQAEs are U.S. Government personnel trained in contract oversight and pest management operations. Those inspectors oversee commercial pest control services contract performance to ensure compliance with the contract and all applicable local, State, Federal, or host-nation regulations or DoD Regulations.
6. Enlisted Military Personnel (Certified Pesticide Applicators)
 - a. U.S. Navy Preventive Medicine Technicians. Preventive medicine technicians, NEC 8432, are responsible for the elimination or control of disease vectors and pests detrimental to health, morale, and habitability of shipboard or deployed environments. They may also apply

pesticides on shore installations during emergencies. Besides pest management, their training in preventive medicine includes quarantine inspection, food service sanitation, industrial hygiene, and control of communicable diseases.

b. U.S. Army Preventive Medicine Specialists. Preventive medicine specialists, 91S, are responsible for the surveillance and control of medically important arthropods and related pests detrimental to health and morale of DoD personnel and installation habitability. Those specialists are trained in industrial hygiene, food service sanitation, control of communicable diseases, and pest management.

c. U.S. Air Force Environmental Apprentice and/or Journeyman and/or Craftsman. Air Force personnel, specialty codes 3E433, 3E453, and 3E473, are responsible for pest control. They are specifically trained through the in-residence environmental apprenticeship course, the environmental journeyman correspondence course, and OJT. They may be certified after approximately 1 year of field experience. Enlisted personnel from other Air Force specialties that apply pesticides as a part of specific duty tasking are required to be DoD-certified pesticide applicators.

6. Reserve Components and Coast Guard. Reserve, National Guard, and Coast Guard personnel involved in the application of pesticides have the same training and certification requirements as the active Component when activated for Federal duty. When not on active Federal duty, those personnel must comply with respective Federal and State training and pesticide applicator certification requirements.

7. Foreign National Pest Management Personnel

Foreign national pest management personnel, in the categories described in subsections E.1. through E.4., above, hired by the Department of Defense at overseas installations are trained, in accordance with this Manual. Frequently, they are employed under a SOFA with the host-nation.

H. PROCEDURES

1. General Training Information. DoD pest management training for proper application and use of pesticides is classified into five general types of programs: “FIFRA (7 U.S.C. 136 et seq., reference (c)) Pesticide Applicator Training”; “OCNUS Non-FIFRA Pesticide Applicator Training”; “Quality Assurance Evaluator Pest Management Training”; “DoD Uniformed Services Operational Pest Management Training and Readiness”; and “Specialized Pest Management Training.” DoD Instruction 4150.7 (reference (a)) requires that all personnel engaged in or supervising pest management functions of any type are trained in the safe, efficient, and environmentally sound use of pesticides and IPM practices.

a. DoD FIFRA (Reference (c)) Pesticide Applicator Certification Training

The DoD FIFRA (reference (c)) Pesticide Applicator Certification Training Program is described in DoD 4150.7-P (reference (b)). Successful completion of training leads to FIFRA

(reference (c)) pesticide applicator certification. That training may be offered to non-DoD employees (e.g. the DoI, the Forest Service, the Coast Guard, the VA, and contractor personnel), but does not result in DoD certification. (See Chapter 10., below.)

b. Non-FIFRA OCONUS Pesticide Applicator Training

(1) Training and certification of DoD pesticide applicators is governed, in accordance with the “DoD Non-FIFRA Pesticide Applicator Training and Certification Program” at Appendix D and Chapter 6, below, host-nation FGS, OEBGD, and SOFAs.

(2) Successful completion for training may lead to either FIFRA (reference (c)) or Non-FIFRA pesticide applicator certification. OCONUS Non-FIFRA pesticide applicator training is addressed in Chapter 6 and Appendix D, below. OCONUS FIFRA (reference (c)) pesticide applicator training is addressed in reference (b) and Chapter 6, below.

c. PMQAE Training. Training is designed to prepare PMQAE’s to effectively evaluate the performance of pest management contractors. PMQAE training consists of two elements: general contract administration and pest management training. PMQAE training is addressed in Chapter 4 and Appendix B, below.

d. Specialized Pest Management Training. Training such as “Self-Help,” “Maintenance Inspector and/or Facilities Management,” “Bird Air Strike Hazard (BASH)” ; etc., may be offered by Components, as needed. Specialized pest management training courses are addressed in Chapter 9, below.

e. Operational and Readiness Training. Training (e.g., “Shipboard Pest Control” and “FSTT”) is designed to prepare uniformed Service members for routine operations, contingency operations, and deployments under conditions of warfare, disaster relief, humanitarian assistance, and military operations other than war. “Operational and Readiness Training” is addressed in Chapter 5, below.

2. Training Evaluations

a. The credibility of a training and certification course depends on the integrity of its evaluation system. To maintain program security and integrity, there must be a controlled evaluation environment and procedures for official evaluation of personnel. Those procedures must ensure complete impartiality and confidentiality, and must be safeguarded against misuse or abuse. Methods of evaluation are determined by regulatory and individual course requirements, as addressed in applicable sections of this Manual or Component’s guidance.

b. The successful completion of both written and performance evaluations should be required to complete pest management training courses leading to pesticide applicator certification. Written and performance evaluations may be used in other training to meet requirements.

(1) Written evaluations measure an individual’s knowledge against the predetermined

pest management course objectives for a specific standard. Failure to achieve a passing grade of 70 percent shall result in course failure.

(2) Performance evaluations measure a candidate's competence in completing specific pest management course tasks as measured against predetermined standards. Each candidate should be evaluated based on materials and guidance provided. Performance evaluations should be conducted on a "pass" or "fail" basis.

3. Training Support Materials. AFPMB Technical Information Memoranda (TIMs), AFPMB Disease Vector Ecology Profiles (DVEPs), similar publications and other technical information and guidance is available from the Defense Pest Management Information and Analysis Center (DPMIAC), Forest Glen Section, WRAMC, Washington, DC 20307-5001.

4. Continuing Education. Continuing education is necessary to maintain professional competency. Participation of both certified pesticide applicators and uncertified personnel in short courses, State pesticide workshops or seminars, and commercially sponsored meetings should be encouraged by local commands (DoD Instruction 4715.10, reference (f)). Examples of continuing education include DoD-sponsored presentations and workshops, in-Service training, industry-sponsored presentations, golf course management workshops, and equipment demonstrations.

CHAPTER 2

APPRENTICE AND/OR OJT

A. PURPOSE

To provide new FIFRA (7 U.S.C. 136 et seq., reference (c)) pesticide applicator trainees with hands-on training before earning DoD certification as a pesticide applicator, as required by DoD 4150.7-P (reference (b)). Trainees gain experience with pest management techniques at the installation where they will be employed.

B. PROCEDURES

1. FIFRA (reference (c)) pesticide applicator trainees shall participate in apprentice training under the supervision of a DoD-certified applicator, or if one is not available, under the guidance of a DoD pest management professional for a minimum of 1 year.

2. The apprentice training shall be tailored to the specific pest problems of the trainee's work place and shall include, but not be limited to, the following elements:

- a. Pesticide labels.
- b. Pesticide safety.
- c. General safety.
- d. Pesticide use.
- e. Equipment use.
- f. Survey and control.
- g. Shop operations.
- h. Federal, State, and local laws.
- i. Pest management plan.
- j. IPM and environmental awareness.
- k. Recordkeeping and reporting.
- l. Pesticide disposal and security
- m. Recognition of pests and pest damage.

3. Pest control shop supervisors and/or pest management coordinators, as applicable, shall manage resources to develop, implement, and conduct the apprentice training program. A model apprentice training record, suitable for adaptation is provided at Appendix A, below.

a. Certifying officials may reduce or waive the 1-year apprentice requirement in writing for trainees who hold current equivalent State certification in applicable categories, DoD PPMPs or for Uniformed Services personnel performing military duties.

b. Apprentice training shall culminate in an on-site practical evaluation of the trainee's competency and progress by a PPMP or certified pest control supervisor. Previously trained or experienced personnel may be evaluated at any time. Failure to obtain a satisfactory evaluation of the apprentice training may result in a recommendation to the installation to remove the trainee from pest control functions.

c. Components may have additional prerequisite training requirements to complete apprentice and/or OJT.

CHAPTER 3

FIFRA (7 U.S.C. 136 et seq., Reference (c)) PESTICIDE APPLICATOR CORRESPONDENCE TRAINING

A. PURPOSE

1. To supplement apprentice training for new pesticide applicator trainees and prepare them for DoD FIFRA (reference (c)) pesticide applicator certification (DoD 4150.7-P, reference (b)).
2. To qualify PPMPs for DoD FIFRA (reference (c)) pesticide applicator certification after taking and passing a written examination (reference (b)).
3. To qualify personnel for accelerated DoD FIFRA (reference (c)) pesticide applicator certification after taking and passing a written examination (reference (b)).

B. PROCEDURES

1. Preparatory Training. Within 6 months of assignment as a trainee, his or her supervisor should have the individual enroll in an AFPMB-approved correspondence course. Those courses may serve as prerequisites for selection to attend a formal resident course. Correspondence courses may also be used with OJT after trainees complete initial resident training. Trainees must obtain a grade of at least 70 percent on every written examination to pass the correspondence training. Results of correspondence training examinations shall be filed with the individuals apprenticeship and/or OJT records.

a. The Naval Facilities Engineering Command Training Course, "Basic Pest Control Technology" is specifically designed for installation pesticide applicators in a military environment. It may help installation personnel determine if a new operator has the ability to acquire the pest management technical knowledge and skills needed to function as part of an installation pest management effort. That course is available to all DoD personnel with approval from their command entomologist or engineering field division applied biologist.

b. The U.S. Navy, "Basic Pest Control Technology," is available to military and DoD employees and to other Federal, State, and municipal employees. Additional information is available from T.P.C. Training Systems, 750 Lake Cook Road, Buffalo Grove, IL 60089. The application, DD Form 1556, "Request, Authorization, Agreement, Certification of Training, and Reimbursement," is available from installation education or civilian personnel offices. There is a registration fee. The course must be successfully completed in 6 months from the date of enrollment.

2. Accelerated Training for DoD FIFRA (Reference (c)) Pesticide Applicator Certification

The DoD Pesticide Applicator Certification Correspondence Course may be substituted for attending formal classroom training under certain circumstances. It meets the training

requirements for the certification of the following:

a. PPMP may request FIFRA (7 U.S.C. 136 et seq., reference (c)) pesticide applicator correspondence course core and category approval from their cognizant PMC instead of a resident certification training course. On approval, PPMPs must request enrollment in the correspondence course from their respective Component training center. Additionally, on approval of the cognizant PMC that correspondence course may also be used for the FIFRA (reference (c)) recertification of PPMPs. (See DoD 4150.7-P, reference (b)).

b. DoD personnel, other than PPMPs, who have prior pest management experience or have had valid FIFRA (reference (c)) certification may request accelerated DoD certification from the cognizant PMC and certifying official, as specified in reference (b). On approval of the cognizant PMC and Component-certifying official, those personnel may request the DoD FIFRA (reference (c)) Pesticide Applicator Certification Correspondence Course instead of resident training. The correspondence course shall not be used for FIFRA (reference (c)) recertification.

CHAPTER 4

PMQAE TRAINING

A. PURPOSE

To train “Quality Assurance Evaluators” to effectively evaluate the performance of pest control contractors. PMQAE training satisfies pest management technology training required by DoD Instruction 4150.7 (reference (a)) for PMQAEs supervising contracts for commercial pest control services. If an installation’s pest management contract efforts are less than 0.25 work-year, the presence of a trained PMQAE at the installation is recommended, but is not mandatory (reference (a)).

B. PROCEDURES

1. Training

a. PMQAE personnel shall be trained, in accordance with requirements and/or guidelines in this Chapter and with any additional Component requirements or guidelines for QAE training.

b. Candidate PMQAE personnel should request guidance on Component training requirements and procedures from their cognizant PMC.

2. Training Certificates

a. PMCs shall validate successful completion of PMQAE training requirements by issuing and signing training certificates, DD Form 2491, which include the following information: individual’s name, expiration date, and pest management categories for which the individual may act as a PMQAE. (See Appendix C, below.)

b. PMQAE certificates of training shall be required of all DoD personnel who act as PMQAEs. Records of PMQAE certificates of training shall be maintained by the cognizant PMC, in accordance with Component regulations and guidelines.

c. Procedures for issuing certificates of training. (See Appendix C, below.)

3. Training Requirements

a. PMQAE training shall include both contract administration and pest management elements. The pest management training component is available to personnel who perform QAE oversight and review of DoD pest management contracts. The pest management training element is available by correspondence or formal classroom instruction. Appendix B, below, provides information on recommended curriculum for PMQAE training.

b. PMCs may waive all or a portion of the initial PMQAE training elements in Appendix

B, below, for personnel with a valid DoD or other EPA-approved pest control certification in applicable pest control categories.

c. PMQAE's must receive pest management refresher training every 3 years. Refresher training may be completed by attending either a pest control quality assurance course or a DoD pesticide applicator recertification course. Component PMCs may extend the expiration date on PMQAE certificates of training for up to 1 year, for cause.

4. The U. S. Navy, "Pest Control Quality Assurance Evaluator Training, Course No. 152," is available as either a formal course or as a correspondence course. Additional information is available from the T.P.C. Training Systems, 750 Lake Cook Road, Buffalo Grove, IL 60089. The application, DD Form 1556, "Request, Authorization, Agreement, Certification of Training and Reimbursement," is available from installation education or civilian personnel offices. There is a registration fee. A score of 70 percent on the closed book, written examination is required to pass the course.

CHAPTER 5

OPERATIONAL TRAINING AND READINESS

A. SHIPBOARD PEST CONTROL

1. Purpose. To establish uniform shipboard pest management certification requirements; maintain a safe and effective program to control insects, rodents, and other pests affecting the health and well-being of personnel; and to prevent loss of materials.

2. Procedures

a. The Medical Department aboard U. S. Navy ships is responsible for pest management operations and the proper use of approved pesticides. On U.S. Navy ships with no medical department, the steward or other assigned person is responsible for pest control operations.

b. Shipboard pest management training and shipboard pest control certification is required annually for all ships' personnel assigned pest management responsibilities, including senior corpsmen, U.S. Navy nurses, stewards, or designated "pest controllers."

c. Shipboard pest control training and shipboard pest control certification is available through any Navy Disease Vector Ecology and Control Center or Navy Environmental and Preventive Medicine Unit. Uniformed Navy entomologists are the certifying officials that issue the shipboard pest control certification cards.

B. U.S. ARMY FSTT

1. Purpose. To train members of the "Field Sanitation Team" to ensure that small Army units have preventive medicine resources to reduce disease and nonbattle injury, in accordance with AR 40-5, "Preventive Medicine"; FM 21-10, "Field Hygiene and Sanitation"; and FM 21-10-1, "Unit Field Sanitation."

2. Procedures

a. Small Army units (companies and below) are required to have a two-member "Field Sanitation Team." The unit commander designates team members consisting of at least one non-commissioned officer when organic aidmen and/or combat medics are not available.

b. "FSTT" is a formal 40-hour resident course. Preventive medicine personnel train team members in all aspects of field sanitation and hygiene at the installation. That includes specialized training in the prevention and control of arthropod and vertebrate pests that threaten the health of deployed forces. Pest management training includes nonchemical strategies as well as the use of pesticides to prevent or reduce infestations.

C. U.S. NAVY OPERATIONAL ENTOMOLOGY TRAINING

1. Purpose. To provide advanced training in the establishment of a temporary public health pest management program where none exists, under conditions of warfare, disaster relief, humanitarian assistance, or military operations other than war.

2. Procedures

a. Active duty preventive medicine personnel from any of the Armed Services including preventive medicine technicians, epidemiologists, environmental health officers, public health officers, and entomologists are strongly encouraged to attend that course. Reserve personnel should complete CANTRAC course B-322-1050, “Medical Entomology and Pest Management Technology,” before enrolling in the “Operational Entomology Training Course.”

b. Personnel holding a valid DoD certification as a “pesticide applicator” may take the recertification examination for Category 8, “Public Health Pest Control,” as part of that course.

D. USAF OPERATIONAL ENTOMOLOGY TRAINING

1. Purpose. To provide advanced training in disease vector impact and control for combat, disaster relief, or other contingency operations.

2. Procedures. Active duty preventive medicine personnel from any of the Armed Services including preventive medicine technicians, epidemiologist, environmental health officers, and entomologists are strongly encouraged to attend that course.

3. Course Description. The USAF “Operational Entomology” Course, USAF School of Aerospace Medicine (USAFSAM) Course #B3OZY43M3-000, is a USAF Surgeon General-mandated course offered six times annually. During that 2-week course, students receive instruction and training on proper surveillance and control techniques for arthropods and arthropod-borne diseases. Through the use of informal lectures, laboratories, and field and scenario exercises, emphasis is place on major arthropods and arthropod-borne diseases, as well as environmental and cultural conditions, which deploying personnel are likely to encounter during deployments. Students are required to use a team approach to solve the pest management and personal protection against vectors and vector-borne diseases during exercises, hostilities, and natural disasters. The scenarios and field exercises are used to evaluate the student’s ability to implement what they learn in class.

a. Attendance

(1) The USAF “Operational Entomology” Course is open to five different USAF medical and civil engineering specialties (Active duty, Reserve, National Guard, and DoD civilian equivalent).

(2) Army and Navy personnel may contact USAFSAM, Public Health (USAFSAM/PH) to request attendance and may be admitted on a space available basis.

b. Prerequisites

Contact the following for additional information:

USAFSAM/PH
2602 West Gate Road
Brooks AFB, TX 78235-5252

E. MEDICAL ENTOMOLOGY AND PEST MANAGEMENT TECHNOLOGY (CANTRAC B-322-1050)

1. Purpose. Primarily intended for Reserve military hospital corpsman and other enlisted and officer preventive medicine specialists from all Components. That is an introductory course covering past, present, and anticipated medical entomology problems that arise during military operations, and practical solutions to those problems.

2. Procedures. There are no prerequisites or fees for that course. Interested personnel should contact the Navy Disease Vector Ecology and Control Center, Poulsbo, WA, or Jacksonville, FL, to obtain quotas.

CHAPTER 6

OCONUS PESTICIDE APPLICATOR TRAINING

A. PURPOSE

To provide training for DoD pesticide applicators operating in OCONUS locations as required to meet FIFRA (7 U.S.C. 136 et seq., reference (c)), OEBGD, FGS, SOFA, and host- nation laws.

B. BACKGROUND

1. FIFRA Pesticide Applicator Training (Reference (c)). When an overseas installation is under the jurisdiction of the EPA and FIFRA (reference (c)) (for example, Guam and Puerto Rico) training and certification requirements are the same as for CONUS. FIFRA (reference (c)) certification and recertification courses conducted OCONUS shall be conducted, in accordance with DoD 4150.7-P (reference (b)).

2. Non-FIFRA. In overseas areas not under the jurisdiction of FIFRA (reference (c)), training shall be conducted, in accordance with the “DoD Non-FIFRA Pesticide Applicator Training and Certification Program,” Appendix D, below, host-nation FGS and OEBGD (DoD 4150.7, reference (a)). The senior PMC for each Military Service in the Non-FIFRA area is responsible for determining training requirements and for coordinating certification training with the applicable training center. Non-FIFRA training procedures for initial training and certification of pesticide applicators in Non-FIFRA areas are outlined in Appendix D, below.

C. PROCEDURES

1. Non-FIFRA Certification training is approved by the designated area PMC using a curriculum developed by the applicable training center for overseas installations not under FIFRA (7 U.S.C. 136 et seq., reference (c)) jurisdiction. Training materials should include regional conditions, native pest problems, and host-nation requirements. Non-FIFRA training and certification is addressed in Appendix D, below.

2. Host-Nation Non-FIFRA Pesticide Applicator Trainee Selection

a. The selection of foreign national pest management personnel who may meet training requirements and function efficiently and effectively in the framework of an installation pest management program is the first step in training. Before investing training resources, the installation should determine that the candidate has the potential and willingness to complete the training program and, when applicable, achieve “pest control” category certification. For example, individuals unable to demonstrate the ability to comprehend label directions written in English, or persons with sensitivity or allergy to pesticides, other chemicals, or insect stings should not be selected. On request, the major command PMC may assist in the selection process.

b. For initial hire situations, it is recommended that trainees for pest control positions shall be employed on a conditional agreement so that if satisfactory progress in their training is not achieved, they may be removed from pest control functions without difficulty. Similarly, if a vacancy in the existing pest control force is anticipated, to maintain operational continuity, it is good practice to select a replacement trainee 6 to 12 months in advance.

c. Non-DoD and Host-Nation Personnel Non-FIFRA Pesticide Applicator Training

(1) Contract pest control personnel who apply pesticides on OCONUS installations or operational bases may attend formal training courses on a space available basis. Training centers and training locations are identified at subparagraph E.3.a.(2), Appendix D, below.

(2) Training centers may require tuition reimbursement from contractor personnel trained. The certifying official may provide Contractor personnel with a certificate of training and DoD Non-FIFRA pesticide applicator certification on successful completion of Non-FIFRA core and category pesticide applicator training requirements.

CHAPTER 7

RESERVE COMPONENTS AND COAST GUARD PEST MANAGEMENT TRAINING

A. PURPOSE

To specify standards of training for Reserve component pest management personnel, when activated for Federal duty and Coast Guard pest management personnel when its operations are transferred to the service and jurisdiction of the Secretary of the Navy. Although the training objectives of this Manual apply primarily to all DoD pest control personnel, State training standards often apply to National Guard or Reserve employees who do not qualify as "DoD personnel," as defined in the "Definitions" section of this Manual, or who apply pesticides on other than DoD property.

B. PROCEDURES

1. National Guard personnel who are State rather than DoD employees and who apply pesticides as part of their duties must be trained and certified by the respective State in which their National Guard unit is located, even if some or all of their pest control activities occur on DoD property.
2. Military Reserve and National Guard employees who are DoD employees and who apply pesticides as part of their job, must be trained and certified, in accordance with DoD 4150.7-P (reference (b)). Those personnel must meet State-certification requirements for pest control operations that occur on non-DoD property.
3. Reserve component personnel, who are required, as part of their military specialty requirements, to apply pesticides while on Active Federal duty must be trained and certified, in accordance with reference (b).
4. Coast Guard personnel who are required, as part of their military specialty requirements, to apply pesticides, while on Active Federal duty operating as a Military Service in the Navy, must be trained and certified, in accordance with reference (b).
5. Components may direct additional specialized pest management training, as addressed in Chapter 5, above.

CHAPTER 8

MAINTENANCE OF TRAINING AND CERTIFICATION RECORDS

A. PURPOSE

To maintain records of pest management training; to record information on pest management training and certification, as applicable; and use the information for overall program management. Those records may be used to do the following:

1. Meet DoD, Federal, and/or State requirements.
2. Provide program oversight.
3. Document eligibility for certification and recertification.
4. Identify additional training needs.
5. Answer data calls.
6. Document professional qualifications of personnel.
7. Validate eligibility to apply pesticides.

B. PROCEDURES

1. The training centers (Appendix E, below) prepare, maintain, and disseminate training information to designated officials.
2. The designated “certifying official” maintains training and certification information on pesticide applicators, and PPMPs to include name, identification number (SSN, or other designation), certification number, pest control categories, date of initial certification, and date of certification expiration.
3. The designated “Component PMC” and the “installation pest management coordinator” maintains information on training PMQAEs, to include name, identification number (SSN or other designation), training completion date, and source of training.
4. The Executive Director, AFPMB, approves and certifies Component-certifying officials. Additionally, the AFPMB maintains training information on Component-certifying officials, to include name, identification number (SSN or other designation), pesticide applicator certification number, pest control categories, date of initial certification, and date of certification expiration.

CHAPTER 9

SPECIALIZED PEST MANAGEMENT TRAINING

A. SELF-HELP TRAINING

1. Purpose. To provide training guidance for establishing installation self-help pest control programs.

2. Procedures. Training for installation self-help program administrators shall be provided on-site by Component PMCs at installations and at training conferences. Training instruction includes recording and reporting self-help pest management operations. After training, self-help administrators assist quarters occupants by doing the following:

- a. Instructing housing occupants to recognize and control household pests.
- b. Issuing written pest management instructions and materials for their use.
- c. Assisting occupants identify pest infestations remaining if the occupant's self-help control efforts have failed.

B. MAINTENANCE INSPECTOR AND FACILITIES MANAGEMENT TRAINING

1. Purpose. To provide training to maintenance inspectors and facility managers on the recognition of pest problems.

2. Procedures. The course is offered regionally or on-site at military installations, as required.

C. PROCUREMENT AND RECEIPT INSPECTION OF TWP

1. Purpose. To prepare installation contracting officers and material receipt inspectors (facilities management personnel) to perform quality assurance inspection of TWP. Properly performed procurement inspections should result in extended service life of TWP (e.g., marine and foundation pilings, utility poles, cross-ties, decking, other dimension timbers, pallets, and scaffolding).

2. Procedures

a. It is DoD policy, under DoD Instruction 4150.7 (reference (a)), to conduct receipt inspection of all TWP.

b. The course is offered regionally or onsite at military installations, as required.

c. Additional course information is available from AFPMB, ATTN: Applied Biologist, Forest Glen Section, WRAMC, Washington, DC 20307-5001.

D. BASH

1. Purpose. To provide training to prevent bird air strikes with DoD aircraft.
2. Procedures. Training is conducted each year at the Bird Strike Committee, USA, meeting.

E. THE AIR FORCE CAREER DEVELOPMENT COURSE (CDC) 3E453,
ENVIRONMENTAL JOURNEYMAN

That correspondence course, primarily used by USAF personnel, is offered through the USAF Extension Course Institute (ECI), Gunter AFB, Alabama 36118. That four volume course provides information on basic and intermediate pest management principles plus survey, identification, and control of a wide variety of vertebrate and invertebrate pests. One volume is dedicated to environmental program management.

CHAPTER 10

NON-DoD PESTICIDE APPLICATOR TRAINING

A. PURPOSE

To provide pesticide applicator training for the Coast Guard, non-military Federal Departments and Agencies (e.g., DoI, Forest Service, and VA), and contractor personnel who apply pesticides on Federal properties.

B. PROCEDURES

Training centers may require tuition reimbursement from contractor personnel trained, in accordance with DoD 4150.7-P (reference (b)) and Appendix D, below.

1. Non- DoD Federal Departments, Coast Guard, Agencies (e.g., DoI, Forest Service, and VA) and contractor personnel who apply pesticides on Federal property may attend formal training courses on a space available basis. DoD FIFRA (7 U.S.C. 136 et seq., reference (c)) training centers and training locations are identified at Appendix E, below. DoD Non-FIFRA training centers and training locations are identified at subparagraph E.3.a.(2), Appendix D, below.

2. Training centers may require tuition reimbursement from contractor personnel trained, in accordance with reference (b) or Appendix D, below. Contractor personnel completing DoD FIFRA, (reference (c)) pesticide applicator training shall be provided a certificate of training rather than DoD FIFRA (reference (c)) certification. Contractor personnel completing Non-FIFRA pesticide applicator training shall be provided a certificate of training and DoD Non-FIFRA certification. (See Attachment 5 to Appendix D, below.)

CHAPTER 11

SERVICE-SPECIFIC REQUIREMENTS

A. PPMP REQUIREMENTS

PPMPs may obtain core training and FIFRA (7 U.S.C. 136 et seq., reference (c)) certification in specific pest control categories by successfully passing a closed book, and written examination following completion of either a DoD correspondence course or DoD formal training.

B. ADDITIONAL PPMP TRAINING REQUIREMENTS

Those requirements are provided in DoD 4150.7-P (reference (b)).

APPENDIX A

PESTICIDE APPLICATOR APPRENTICE TRAINING

Sample Format

Instructions - Apprentice training is tailored to local pest management requirements. The supervisor lists common installation pests and pest management tasks. Minimally, include all pests listed on the installation pest management plan. The supervisor shall initial and date each item in the applicable column on successful completion by the apprentice.

Trainee's Name

Supervisor's Name

Date Training is
Completed

Installation

PART A. PESTS

Pest

Location

Surveillance

Pre- and Post-Treatment

Select Nonchemical Control Methods

Select Chemical Control Methods

Complete Pest Management Task

Pest Management Task

Location

Supervisors Initials and Date

Ant Surveillance

Ant Control

Argentine

Carpenter

Fire Ants

Pharoah

Bat Control

Bees

Bees in Wall

<u>Pest Management Task</u>	<u>Location</u>	<u>Supervisors Initials and Date</u>
-----------------------------	-----------------	--------------------------------------

Bees - Outside Bee Hive and Swarm Management		
---	--	--

Birds		
-------	--	--

Pesticides Trapping and Other Controls		
---	--	--

Cat and Skunk Trapping		
------------------------	--	--

Cockroach		
-----------	--	--

German Cockroaches American Cockroaches Brown-Banded Cockroaches Oriental Cockroaches		
--	--	--

Commensal Rodents		
-------------------	--	--

Norway Rats in and Around Structures Norway Rats - Outdoors Norway Rats - Rat Proofing		
---	--	--

Roof Rats in and Around Structures Roof Rats - Rat Proofing		
---	--	--

House Mouse - Tracking Powder House Mouse - Multiple Catch Traps House Mouse - Glue Board		
---	--	--

Crickets		
----------	--	--

Baits and Sprays Nonchemical Control		
---	--	--

Flea Surveillance		
-------------------	--	--

Flea Control		
--------------	--	--

Interior Exterior Area Treatment		
-------------------------------------	--	--

<u>Pest Management Task</u>	<u>Location</u>	<u>Supervisors Initials and Date</u>
Flies		
Nuisance Flies, including Source Control		
Biting Flies, including Source Control		
Ground Nesting Yellow Jackets		
Mites		
Bird Mites		
Clover Mites		
Mosquitoes		
Mosquito Surveillance		
Mosquitoes, Source Control and Larviciding		
Mosquitoes, Adulting		
Pillbugs and Sowbugs		
Silverfish and Firebrats		
Stored Product Pest Surveillance		
Stored Product Pest Control		
Nonchemical Control		
ULV Space Sprays		
Termites, Subterranean		
Tick - Brown Dog Tick		
Indoor Surveillance		
Indoor Control		
Yard Surveillance		
Yard Control		
Ticks - Outdoors		
Field Tick Surveillance		
Field Tick Control - Out Doors		
Tree and Ornamental Pest Management		

<u>Pest Management Task</u>	<u>Location</u>	<u>Supervisors Initials and Date</u>
Venomous Spiders		
Black Widow		
Brown Recluse		

PART B. HEALTH AND SAFETY (PERSONAL PROTECTIVE EQUIPMENT)

<u>Pest Management Task</u>	<u>Location</u>	<u>Supervisors Initials and Date</u>
Respirator Use and Maintenance		
Laundering Work Clothes		
Selecting Personal Protective Equipment		

PART C. OPERATIONS AND MAINTENANCE

<u>Pest Management Task</u>	<u>Location</u>	<u>Supervisors Initials and Date</u>
Orderly Vehicle Layout		
Area Application of:		
Herbicides		
Insecticides		
Fungicides		
Calculations (lbs/ac from percent concentration)		
Calculations (lbs/gal)		
Dispersal and Cleanup		
Equipment Repair and Maintenance		
Equipment Calibration		
Forms and Reports		

Initials Indicate Trainee's Competence in Performing Job. (Remarks: The above listing is condensed. Actual jobs shall be listed by the PMC based on installation requirements.)

APPENDIX B

RECOMMENDED PMQAE TRAINING REQUIREMENTS

A. PEST MANAGEMENT TECHNOLOGY TRAINING

PMQAE's shall complete a pest management technology training course.

B. PMQAE TRAINING REQUIREMENTS

Pest management technology training courses should contain the following critical elements:

<u>CRITICAL ELEMENT</u>	<u>HOURS REQUIRED</u>
Pesticide Laws and Regulation	1.0
Pesticide Labels, Labeling and Material Safety Data Sheets.	1.0
The Pest Management Plan: The Installation Guide	0.5
Environmental Compliance Audits and the Installation	1.0
Pesticides Overview (Classification and Formulations)	1.0
Integrated Pest Management	1.0
Environmental Hazards from Pesticides	1.0
Personal Safety and Protective Measures	1.0
Pesticide Application Equipment	1.0
Records and Reporting	1.5
Nuisance Pest Management (including: cockroach, flea, and miscellaneous arthropod control)	3.0
Structural Pest Control	2.0
Stored Product Pest Control	1.0
Control of Medically Important Pests	1.0
Pest Vegetation Control (Right of Way)	1.0

<u>CRITICAL ELEMENT</u>	<u>HOURS REQUIRED</u>
Turf Management	1.0
Ornamental Pest Management	1.0
Vertebrate Pest Management	1.0
Pest Control Quality Assurance Plan	2.0
Pesticide Calculations	1.0
Administrative	1.0
Testing and Test Review	2.0
Total Hours = 28.0	

C. Examination

A formal written examination that is based on the course content with at least three questions for each hour of instruction shall be given at the end of the instruction. Students who successfully complete the course, with a score of 70 percent or better, shall receive a certificate of training in pest management quality assurance evaluation.

APPENDIX C

PROCEDURES FOR ISSUING DOD CERTIFICATE FOR PMQAEs

- A. Certificates shall be issued to pest management personnel by the designated certifying official on determination that the candidate has successfully completed pest management training requirements. Installation civilian and local national PMQAE personnel must successfully pass the PMQAE formal or correspondence course to be issued a DoD Certificate of Training.
- B. The words, "PEST MANAGEMENT QUALITY ASSURANCE EVALUATOR TRAINING, as prescribed by DoD Standards for Pest Control Categories...", shall follow "has successfully completed" on DD Form 2491. Categories of pest control, which the PMQAE is designated to evaluate, shall be indicated on each certificate. The certificate number and expiration date shall be posted on DD Form 2491. (See Attachment 1 to this Appendix, below.)
- C. Certificate numbers vacated by revocation, resignation, or for any other reasons shall not be reissued.
- D. Certificates shall bear the name of the individual without any additional titles. In situations where it is desirable to identify the certified individual as a "pest control inspector," or "planner-estimator," a standard recognition form shall be used.
- E. Certificates shall expire 3 years from the last day of the month in which the certificate is issued. The certifying official may extend an individual's certification for cause on a one time basis for a period of not more than 1 year.
- F. A current list of certifying officials shall be maintained by the Component senior PMC and the AFPMB.

Attachment

DD Form 2491, "DoD Certificate of Training"

Figure C-1-1. DD Form 2491, “DoD Certificate of Training”

APPENDIX D

DOD NON-FIFRA PESTICIDE APPLICATOR TRAINING
AND CERTIFICATION PROGRAM

INTRODUCTION

This DoD Non-FIFRA Pesticide Applicator Training and Certification Program is issued under the authority of DoD Instruction 4150.7 (reference (a)). It replaces the Non-FIFRA portion of the “Department of Defense Plan for the Certification of Applicators of Restricted Use Pesticides,” which was canceled by DoD 4150.7-P (reference (b)). This Manual prescribes the procedures for DoD Non-FIFRA certification of pesticide applicators.

APPENDIX D

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DOD NON-FIFRA PESTICIDE APPLICATOR TRAINING AND CERTIFICATION
PROGRAM

A. PURPOSE

1. To ensure that pesticide applicator training complies with DoD pest management policy, OEBGD, FGS, SOFA, and host-nation laws, in accordance with DoD Instruction 4150.7 (reference (a)).

2. To set standards for Non-FIFRA training and certification for pesticide applicators operating in OCONUS Non-FIFRA areas; e.g., Japan, Korea, and Europe.

B. APPLICABILITY

1. This Manual applies to all DoD employees applying any pesticides on land or property in Non-FIFRA areas under DoD jurisdiction. Terms used in this Manual that are unique to the military pest management program are defined in the “Definitions” section of this Manual..

2. Commercial firms that contract to apply pesticides for the DoD Components are not DoD applicator employees. They may be trained and provided DoD Non-FIFRA certification by the Department of Defense.

C. RESPONSIBILITIES

1. DoD Program Responsibility

a. The OSD, as “lead agent,” shall have overall responsibility for policy development, implementation, and surveillance of the DoD Pest Management Program (DoD Instruction 4150.7, reference (a)).

b. The AFPMB, chartered by the lead Agency, reviews pest management policy matters, proposes policy changes, and establishes Non-FIFRA pesticide applicator training and certification requirements for the Department of Defense (reference (a)).

2. Component Responsibilities

a. Each Component, except the Joint Chiefs of Staff and the Combatant Commands, shall designate a “senior PMC” as the point of contact for the Component’s Non-FIFRA pest management training program.

b. Each Component’s senior PMC, except the Joint Chiefs of Staff and the Combatant Commands, shall nominate OCONUS PMCs to certify the competency of the Component’s Non-FIFRA pesticide applicators. Components nominee’s qualifications shall be formally reviewed and if qualified, approved, and acknowledged by the Executive Director of the AFPMB.

c. Non-FIFRA certifying officials, in concert with Non-FIFRA Component PMCs.

(1) Shall ensure that Non-FIFRA certification training meets the requirements of this Appendix.

(2) Assume lead responsibility for Non-FIFRA pesticide applicator training in his or her area or responsibility. Recommend applicable region-specific Non-FIFRA training requirements for their Non-FIFRA area to designated DoD Training centers. Coordinate Non-FIFRA pesticide applicator training with the designated training center, training site, and host-nation authorities.

(3) Determines whether candidate pesticide applicators have met DoD and Component training standards.

(4) Issues Non-FIFRA certification, as applicable. See Attachment 5 to Appendix D, below.

d. Training Center Responsibilities

(1) Develop or review and approve plans of instructions for Non-FIFRA training that meet training objectives identified by OCONUS PMCs for overseas areas not under the jurisdiction of FIFRA (7 U.S.C. 136 et seq., reference (c)).

(2) Ensure that Non-FIFRA training is conducted, in accordance with this Appendix, host-nation FGS, OEBGD, and SOFAs.

(3) Ensure that Non-FIFRA programs are tailored to fit language-translation problems, site specific pests, and host-nation considerations; etc.

D. PROCEDURES

1. Deny, Suspending, and Revoking Certification. Any DoD Non-FIFRA pesticide applicator may have his or her certificate denied, suspended, or revoked. Situations that may be cause for certificate denial, suspension, or revocation are misuse of a pesticide and falsification of any records required to be maintained by the certified applicator. Additional actions that may be cause for denial, suspension, or revocation are, as follows:

a. Pending investigations of pesticide-related episodes or accidents resulting in human or animal injury or environmental contamination, such as to water supplies, food, and foodstuffs.

b. Conviction under any Federal or host-nation pesticide or environmental law.

c. Failure to maintain records, as required by Federal, host-nation, or DoD Regulation, and Component regulation.

d. Failure to comply with pest management DoD Directives or Regulations, and

Component directives or regulations.

- e. Failure to use applicable safety equipment, as identified by the pesticide label.
- f. Inability to perform work in a safe manner due to incompetence, carelessness, or physical or mental deficiency.
- g. Pending outcome of criminal or civil action. (See paragraphs D.1.a. through D.1.b., above.)

2. Suspension or Revocation of Certification. Installation commanders shall initiate a formal review if pesticide violations are suspected. Any certified applicator who violates any provision of a law or implementing regulations shall have his or her certificate reviewed for possible suspension or revocation. Suspected violations, such as pesticide misuse or recorded falsification, shall be reported through applicable command channels to the office of the certifying official. The certifying official shall review the suspected violation and determine if further action is required. If no action is warranted, the installation commander shall be notified in writing that a review of the suspected violation has been conducted and that it has been determined that a violation has not occurred. If the certifying official determines that a violation may have occurred, he or she shall initiate action to temporarily suspend the certificate of the applicator(s) and forward the matter to the Component's senior PMC for review.

3. Unauthorized Use of Pesticides

Only certified applicators or persons working under the direct supervision of a certified applicator shall use restricted use pesticides. "Direct supervision" is defined in the "Definitions" section of the 'Front Matter' of this Manual. The individual's certification must be applicable to the work and consistent with DoD categories. Similarly, contract pesticide applicators shall be certified in, or work under the direct supervision of personnel certified in DoD categories commensurate with the work to be performed. Furthermore, contract specifications shall include the clause that a designated certified individual shall be physically present on the DoD installation.

4. Non-FIFRA Certification Categories. DoD offers Non-FIFRA certification in six of the categories that are consistent with those described in 40 CFR 171.3 (reference (d)) and two subcategories (3.a., and 7.a.) to meet the specific requirements for DoD pesticide use. Training and certification in all of the DoD categories or subcategories may not be available to Non-FIFRA pesticide applicators.

<u>Pest Control Category</u>	<u>DoD Category</u>
Forest Pest Control	2
Ornamental and Turf Pest Control	3
Subcategory - Stored Products Fumigation	3a
<u>Pest Control Category</u>	<u>DoD Category</u>

Aquatic Pest Control	5
Right-of-Way Pest Control	6
Industrial, Institutional, Structural, and Health-Related Pest Control	7
Subcategory - Stored Products Fumigation	7a
Public Health Pest Control	8

5. General Core Phase Standards. DoD employees desiring Non-FIFRA certification shall demonstrate practical knowledge of the principles and practices of IPM, and safe use of pesticides. Testing shall be based on examples of problems and situations applicable to the particular category or subcategory of the applicator's certification. (See Attachments 1 and 2, to this Appendix, below.) Successful passage of a comprehensive examination covering the following general or core areas is prerequisite for certification in specific categories:

a. Recognizing common pests to be controlled and damage caused by them, including the following:

- (1) Common features of pest organisms and characteristics of damage and/or characteristics needed for pest recognition.
- (2) Recognition of relevant pests.
- (3) Pest development and biology, as may be relevant to problem identification and control.

b. Label and labeling comprehension, including the following:

- (1) Requirement and/or necessity for use consistent with label.
- (2) General format of labels and labeling.
- (3) Understanding of product versus chemical and common names, signal words and symbols, and precautionary statements commonly appearing on the label and/or labeling.
- (4) Classification of product (general use versus restricted use).
- (5) Protective clothing and equipment requirements.
- (6) Environmental hazard statements.
- (7) Storage and disposal instructions.
- (8) When to read different sections of the label and/or labeling.

(9) Directions for use section, to include the following:

- (a) Crop and/or animal and/or site.
- (b) Dosage instructions.
- (c) Timing and methods of application.
- (d) Mixing directions (if applicable).
- (e) Pests to be controlled.

c. Recognizing local environmental situations that must be considered during application to avoid contamination, including the following:

- (1) Weather factors that affect pesticide application and why.
- (2) Factors that affect pesticide drift.
- (3) Factors that affect pesticide runoff and other aquatic contamination (including formulation, site, amount of pesticide, soil type, rainfall, drainage, and direct application to waterways).
- (4) Presence of wildlife, bees, aquatic areas, and other nontarget areas.

d. Recognizing pesticide poisoning symptoms and procedures to follow in case of a pesticide accident, including the following:

- (1) Signs and symptoms of pesticide poisoning.
- (2) First aid (including recognition of pertinent information on label) and other procedures to be followed in case of a pesticide accident.

e. Storage of pesticides and containers, including the following:

- (1) Applicable storage facility characteristics.
- (2) Storage facility supplies.
- (3) Proper storage and identification of pesticide containers.

f. Disposal of pesticides, containers, and rinseates, including the following:

- (1) Proper methods of disposing of excess pesticides.
- (2) Proper methods of disposing of pesticide rinseates.

- (3) Proper methods of disposing of used pesticide containers.
- (4) Consequences of improper disposal (including health, environmental, and legal precautions).
- g. Legal responsibility; laws, and regulations (and liability information), including the following:
 - (1) Pertinent host-nation and/or U.S. Federal pesticide laws and regulations not previously discussed.
 - (2) Types of situations in which applicator may be held liable.
 - (3) Liability and/or penalties as yet another reason for following information on labels and/or labeling and other laws and regulations.
 - (4) The need for recordkeeping and how to keep records.
 - (5) DoD Regulations that affect pesticide applicators.
- h. Safety, including the following:
 - (1) Acute pesticide toxicity levels.
 - (2) Chronic effects of pesticide exposure.
 - (3) Concept of accumulative effects.
 - (4) Concept that risk is a function of both pesticide toxicity and exposure.
 - (5) Common routes of pesticide exposure (oral, dermal, and inhalation).
 - (6) Protective clothing and equipment (including body covering, goggles, aprons, gloves, hat, foot coverings, goggles and/or face shields, and respirators).
 - (7) Care and maintenance of protective clothing and equipment.
 - (8) Personal hygiene.
 - (9) Proper mixing and/or loading of concentrated pesticides.
 - (10) Closed handling systems.
- i. Reentry and worker protection, including the following:
 - (1) Definition and importance of reentry intervals.

- (2) Types of reentry intervals.
- (3) Warnings to workers and reentry intervals.
- (4) Content of warning to workers.
- (5) Early reentry.
- (6) Other worker protection rules.
- j. Pesticides, including the following:
 - (1) Classes and types of pesticides.
 - (2) Choosing the correct pesticide.
 - (3) Typical formulations (characteristics, advantages, disadvantages, and main uses).
 - (4) Pesticide compatibility.
 - (5) Adjuvant(s) and surfactants.
 - (6) Factors that influence effectiveness or lead to such problems as resistance to pesticides.
- k. Pest control strategies, including IPM factors such as the following:
 - (1) Insect pests.
 - (a) Insect control strategies.
 - (b) Importance of accurate pest identification and timing in the pest's life cycle to control strategies.
 - (2) Plant disease pests, including the following:
 - (a) Plant disease control strategies.
 - (b) Types of control strategies.
 - (c) Importance of timing in developing and applying disease control strategies.
 - (3) Weeds, including the following:
 - (a) Weed control strategies.

- (b) Importance of timing in developing and applying weed control strategies.
- (4) Mollusk control strategies (if applicable).
- (5) Vertebrate control strategies.
- l. Application equipment factors such as the following:
 - (1) Typical pesticide spray equipment (characteristics, advantages, disadvantages, and main uses).
 - (2) Nozzle patterns and materials.
 - (3) Sprayer selection, use, and care.
 - (4) Granular applicators (characteristics, advantages, disadvantages, main uses, selection, use, and care).
 - (5) Cleanup of equipment after use.
- m. Calibration factors, such as the following:
 - (1) Mixing soluble and wettable powders.
 - (2) Mixing liquid concentrate formulations.
 - (3) Determining size of area to be treated.
 - (4) Considerations before calibration of sprayer.
 - (5) Selecting nozzle tips.
 - (6) Adjusting nozzle output.
 - (7) Swath width and equipment calibration.
 - (8) Field calibration of sprayer.
 - (9) Calibration of granular applicators (if applicable).
- n. Proper transportation of pesticides.
- o. Groundwater protection factors, such as the following:
 - (1) Nature of groundwater.

- (2) Factors that affect groundwater contamination.
 - (3) Local groundwater conditions.
 - (4) Applicator practices that impact on groundwater contamination including the use of buffer zones.
- p. Endangered species protection factors such as the following:
- (1) Endangered species recognition.
 - (2) Concept of habitat.
 - (3) Ways pesticides may harm endangered species.
- q. Responsibility of applicators to use pesticides properly to protect such products for future use and supervision responsibilities of certified applicators.

6. Competency Examinations

a. Certification Requirement. DoD employees desiring certification must demonstrate competency in specific standards, as described in Attachment 1 to this Appendix, below.

b. Evaluation of Competency

(1) Written Requirements. A closed book written examination shall be required to determine competency in general and applicable specific standards outlined in Attachment 1 to this Appendix, below, for each category of certification. Testing shall be based on examples of problems and situations applicable to the particular category or subcategory of the applicator's certification and areas of competency outlined in the general and specific standards of competency. Examinations may include true-false, multiple choice, completion, and problem type questions and shall require a passing score of at least 70 percent. Sample examination questions are shown in Attachment 2 to this Appendix, below.

(2) Performance Requirements. Written and performance testing shall be conducted for the core phase (general standards) and the categories (specific standards) in which training and certification is desired. Satisfactory completion of training courses, written examinations and demonstration of the ability to perform a procedure or use of dispersal equipment qualifies an individual for certification. On qualification of an individual, the training center shall notify the applicable pest management certifying official that the individual completed formal training requirements for Non-FIFRA certification in designated categories, as described in section D., above.

7. Procedures for Issuing Certificates of Competency. Certificates shall be issued to pest

management personnel by the designated certifying official on determination that the candidate has successfully completed certification requirements. Personnel successfully completing certification requirements for the core and one or more of the pest control categories and apprenticeship requirements shall be issued a certificate of competency (DD Form 1826, 8 ½" X 11," and DD 1826-1, wallet size, see Attachment 3 to this Appendix, below). To identify certified personnel, a uniform numbering system shall be used in the issue of certificates (see Attachment 5 to this Appendix, below).

E. DOD NON-FIFRA PESTICIDE APPLICATOR CERTIFICATION TRAINING PROGRAM

1. Developmental training is provided for previously untrained and inexperienced personnel who embark on a training program, not to exceed 2 years. During that period, all pesticide application is done under the direct supervision of a certified pesticide applicator. The training program shall consist of the two following requirements: apprenticeship training and formal component training-center approved classroom training. Written examinations are required for formal training to achieve certification.

2. During training, anticipated language problems may be overcome by maximizing “hands-on” training with equipment and materials that shall be used in pest management work. That type of training places instructors and trainees on a common ground and eases the burden of communication.

3. Presentation of course instruction and examinations in the native language is encouraged. Trainees shall demonstrate the ability to comprehend labels written in English, as a minimum.

a. Training and Certification Procedures

(1) Apprenticeship IPM Training. Trainees shall participate in apprenticeship training under the supervision of a DoD-certified individual, or if not available, under the guidance of a PPMP, for at least 1 year. A sample apprenticeship training plan is outlined in Appendix C, above.

(2) Formal Classroom Training. Formal classroom training shall be obtained through one of the Component training centers. Formal classroom training may be requested at OCONUS sites under Non-FIFRA jurisdiction when it is more cost effective to the Department of Defense.

(a) The DoD “Training Centers” are, as follows:

U. S. Army AMEDD Center and School
ATTN: MCCS-PM
Fort Sam Houston, TX 78234-6142

Center for Health Promotion and Preventive Medicine-Europe
ATTN: MCHB-EN
CMR 402
APO AE 09180
Navy Disease Vector Ecology and Control Center

19950 Seventh Avenue, NE, Suite 201
Poulsbo, WA 98370-7045

Navy Disease Vector Ecology and Control Center
Naval Air Station, Box 43
Jacksonville, FL 32212-0043

Atlantic Division
NAVFACENGCOM
1510 Gilbert Street
Norfolk, VA 23511-6287

Naval Facilities Engineering Command Headquarters
200 Stovall Street
Alexandria, VA 22332-2300

Pacific Division
NAVFACENGCOM
Pearl Harbor, HI 96860-7300

(b) Individuals shall be required to complete course curricula applicable to their duties, to include a core phase and specific category courses. All students are required to pass both portions of pest control training (core and category) to be DoD Non-FIFRA certified. The core phase is a prerequisite and provides basic information common to all pesticide applicators. Category courses may be grouped to facilitate training and specialization. Those pest control categories may be addressed as separate blocks of instruction as the training situation dictates. (See Attachment 5 to this Appendix, below, for information and subject areas of the service schools training course curricula.)

(3) Written examinations, prepared by training centers of the respective Components, shall be based on course content and study materials made available to applicators. The actual number of examination questions for each subject shall be directly related to the instructional hours and subject complexity, but three questions for each lecture hour (see Attachment 5 to this Appendix, below) shall be a minimum used by all the training centers. Separate examinations shall be given for the core section and each category section. (Sample examination questions are included in Attachment 3 to this Appendix, below).

(4) Training centers shall provide the designated certifying official with examination results on the individual's attainment of the qualifying test scores in the core phase and on individual categories. A grade of at least 70 percent on any examination is passing. Personnel with scores between 50 percent and 70 percent on the core phase exam may attempt an immediate reexamination (at the discretion of the course director and the individual's supervisor) or may take up to 90 days to restudy and undergo reexamination. During the core phase, an individual who fails with a score of 50 percent or less shall be disenrolled from the formal training course and the installation, designated certifying official and the major command PMC shall be notified for applicable action. A passing grade on the core phase examination is a prerequisite for certification

in any category.

(5) Individuals who score between 50 percent and 70 percent shall be allowed to continue with category training and to retake the examination(s) failed. Personnel with scores between 50 percent and 70 percent may attempt an immediate reexamination (at the discretion of the course director and the individual's supervisor) or may take up to 90 days to restudy and undergo re-examination. Reexamination may be administered by the educational center supporting the individual's installation. A second failure shall result in a recommendation by the training center to the command consultant and/or area PPMP to remove the individual from pest control duties.

(6) Training centers providing training for personnel from other Services shall forward those results to the respective Component certifying official.

2. Procedures for Recertification

a. Triennial recertification training and testing is mandatory to maintain DoD certification. That training shall be accomplished through attendance at an approved DoD course. During those courses, new information is provided to update the knowledge of the students and to review safety procedures. A secondary requirement of those courses is to re-evaluate the students level of competency in pest control through written examinations and OJT performance. Since it is the objective of the Department of Defense to maintain a fully trained pest control force, the courses shall be made available to all certified applicators.

b. Certification is valid for 3 years from the date of certification issuance. Recertification shall be accomplished by the last day of the month in which the original certificate expires. The certifying official may extend an individual's certification for cause on a one-time basis for a period of not more than 6 months. To be certified, the individual must do the following:

(1) Attend a DoD-approved recertification course using as a minimum the AFPMB standardized curricula (Attachment 4 to this Appendix, below).

(2) Take and pass a written examination with a score of at least 70 percent on the core to include calculations, calibration, and all category examinations for which recertification is required.

(3) An individual failing a recertification examination may be given up to 90 days from the date on which the examination was failed to study applicable materials. At the end of the study period, the pest management instructor or the installation training officer shall administer a closed-book make-up examination. A second failure shall result in the individual not being certified in the category(s) failed. Successful completion of the resident basic training course shall be the only method of obtaining certification in a category failed twice. In either case, failure in the recertification examination shall be cause for certificate revocation and for recommendation for removal from pest control functions. Documentation of failures shall be forwarded to the command PMC.

c. Applicator recertification courses shall be consistent with the requirements of

Attachment 4 to this Appendix, below. Personnel attending recertification courses shall only be allowed to test and qualify in those categories for which they already hold initial certification. New category training must be achieved, as outlined in subsection D.6., above. Additional contact hours may be added at the discretion of the local training sponsor.

3. Certification Documents

a. DoD certificates (see Attachment 3 to this Appendix, below) shall be issued for specific pest control categories to pesticide applicators who successfully complete the required training (see Attachment 1 to this Appendix, below).

b. Procedures for issuing DoD certificates for pesticide applicators are given in Attachment 5 to this Appendix, below.

Attachments	<u>Page</u>
1. DoD Non-FIFRA Category Certification Standards	D-1-1
2. Sample Examination Questions	D-2-1
3. DoD Applicator Certificates	D-3-1
4. Minimum Curriculum Requirements for DoD Non-FIFRA Certification and Recertification Training	D-4-1
5. Procedures for Issuing DoD Non-FIFRA Certificates for Pesticide Applicators	D-5-1

DoD NON-FIFRA CATEGORY CERTIFICATION STANDARDS

A. DOD Pest Control Categories

DoD pest control categories 2. through 8. correspond to EPA categories 2. through 8. described in 40 CFR 171.3 (reference (d)). The Department of Defense has added two subcategories: subcategory 3.a., “Soil Fumigation,” and Subcategory 7.a., “Stored Products Fumigation.” DoD employees desiring certification must demonstrate competency in the categories of pest control that they seek certification.

B. Standards of Competency

Standards of competency required by the Department of Defense are described in subsections B.1. through B.8., below:

1. Forest Pest Control, Category 2. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, forest management practices, fertilization programs, plant biology, physiology and pathology, classification and mode of action of pesticides, biology and control of forest pests, and natural resources utilization.
2. Ornamental and Turf Pest Control, Category 3. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, vegetation and turf management practices, fertilization programs, plant biology and physiology, classification and mode of action of herbicides, biology and control of ornamental and turf pests and diseases, weed control, and natural resources conservation programs.
3. Soil Fumigation, Subcategory 3.a. Individuals to be certified in that category must successfully complete the core phase and category 3. training. They must complete training and pass a written examination covering soil fumigation. That training shall include, but not limited to, protective equipment for fumigation, general safety procedures, including posting, reentry and aeration, supervisory responsibilities, and application techniques applicable to various situations.
4. Aquatic Pest Control, Category 5. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, plant biology and physiology, identification and control of aquatic weeds, classification and mode of action of herbicides, and natural resources conservation programs. That category excludes applicators engaged in public health-related activities. Such applicators shall be covered in “Public Health Pest Control,” Category 8., below.
5. Right-of-Way Pest Control, Category 6. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, plant biology and physiology, identification and control of weeds, classification and mode of action of herbicides, and natural resources conservation

programs.

6. Industrial, Institutional, Structural, and Health-Related Pest Control, Category 7.

Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, biology, identification and control of common household pests, control of vertebrate pests, control of wood destroying organisms, biology and control of termites, biology and control of stored product pests, and fumigation procedures.

7. Stored Product Fumigation, Subcategory 7.a. Individuals to be certified in that category must successfully complete the core phase and category 7. training. They must attend a training program and pass a written examination covering the fumigation of stored subsistence and other commodities. That training shall include, but not limited to, use of personal protective equipment for fumigation, general safety procedures, including posting, monitoring, reentry and aeration, and application techniques applicable to various situations.

8. Public Health Pest Control, Category 8. Individuals to be certified in that category must successfully complete the core phase. They must attend a training program and pass a written examination covering, but not limited to, biology, identification and control of vectors and pests of medical importance, identification and handling of venomous animals, and control of vertebrate disease reservoirs, including rodent control techniques.

SAMPLE EXAMINATION QUESTIONS

A. GENERAL STANDARDS TEST FOR CORE

Use the pesticide label for Dursban LO to answer questions 1. through 3.

1. All registered pesticides have a statement on the label reading:
 - a. Danger - Poison
 - b. Toxic to Bees
 - c. Warning - Toxic
 - d. Keep out of Reach of Children
2. What is the acute oral toxicity (LD50), which is indicated by the signal word?
 - a. 0-50 milligrams per kilogram (mg/kg)
 - b. 50-500 mg/kg
 - c. 500-5,000 mg/kg
 - d. Greater than 5,000 mg/kg
3. From the label, which of the below is NOT a target pest?
 - a. Fleas
 - b. Silverfish
 - c. Honeybees
 - d. Subterranean termites
4. Which kind of pesticide prevents normal clotting of blood?
 - a. Surfactant
 - b. Synergist
 - c. Anticoagulant
 - d. Animal systemic

5. If it is determined that a pesticide treatment is necessary, then the applicator should select a pesticide that will:

- a. Kill all insects in target area
- b. Remain active for many years
- c. Be effective while harming the environment least
- d. Do all of the above

6. Pesticides must be repackaged if containers are leaking. Which of the following must be put on the new container?

- a. Sign signifying type of poison
- b. Complete label
- c. Sign with name and percent of pesticide
- d. Sign with word "danger" and name of pesticide

7. A pesticide that is absorbed in one part of a plant or animal and transported to another part where it kills a pest is called a:

- a. Contact pesticide
- b. Volatile pesticide
- c. Residual pesticide
- d. Systemic pesticide

8. To spray weeds using a hydraulic sprayer, what type of nozzle and pressure do you need?

- a. Coarse nozzle and high pressure
- b. Coarse nozzle and low pressure
- c. Fine nozzle and high pressure
- d. Fine nozzle and low pressure

B. CATEGORY 3.. ORNAMENTAL AND TURF PEST CONTROL

1. When spraying near human habitations you should minimize the hazard of spray drift to humans, pets, and other domestic animals by reducing:

- a. Pressure
- b. Volume
- c. Vehicle speed
- d. Diameter of nozzle openings

2. If you find circles or arcs of dark-green grass with mushrooms around the outer edge, surrounding areas of light-colored or dead grass, what would you suspect?

- a. Dollar spot
- b. Rotting roots or wood under turf
- c. Fairy ring
- d. Cottony blight

3. Small, sometimes immobile insects with sucking mouthparts and often with waxy body coverings are:

- a. Spider mites
- b. Scale insects
- c. Thrips
- d. Sowbugs

4. Mole damage to turf areas may be sharply reduced by:

- a. Daily watering
- b. Soil tilling
- c. Elimination of food insects
- d. Soil compaction

C. CATEGORY 5.. AQUATIC PEST CONTROL

1. Water hyacinth is an example of a (an):
 - a. Emerged weed
 - b. Submerged weed
 - c. Free floating weed
 - d. Floating, but rooted, weed
2. The most effective and extensively used herbicide for algae control is:
 - a. 2, 4-D
 - b. Dalapon
 - c. Copper Sulfate
 - d. Silvex
3. The first step in controlling weeds growing in drainage ditches is to:
 - a. Select proper herbicide
 - b. Identify the weed problem
 - c. Calculate amount of herbicide required
 - d. Determine the area to be sprayed
4. To control coontails, you are to apply Aquathol Plus^R at the rate of 1 gallon for each acre foot. You determine that the surface area is 20 acres and the lake average depth is 12 feet. How many gallons of Aquathol Plus do you need?
 - a. 1.6
 - b. 16
 - c. 240
 - d. 320

D. CATEGORY 6.. RIGHT-OF-WAY PEST CONTROL

1. Insecticidal and herbicidal equipment should not be interchanged primarily to protect the:
 - a. Public
 - b. Operator
 - c. Environment
 - d. Desirable plants
2. If a standard rate of 2 pounds active ingredient (AI) for each acre is given, how much 2,4-D amine salt product is needed if the product contains 4 pounds AI per gallon?
 - a. 0.5 gallons
 - b. 1.0 gallons
 - c. 2.0 gallons
 - d. 10 gallons
3. Contact herbicides are most effective against perennial plants.
 - a. True
 - b. False
4. Sometimes the taste of plants is improved as a result of herbicide spraying. That presents a danger primarily to:
 - a. The operator
 - b. Children
 - c. Livestock
 - d. Desirable vegetation
5. Irrigation ditches and potable water supplies should be protected from persistent herbicides such as picloram by:
 - a. Using a mist machine
 - b. Leaving a buffer zone

E. CATEGORY 7., INDUSTRIAL, INSTITUTIONAL, STRUCTURAL AND HEALTH
RELATED PEST CONTROL

1. The domestic rodent that is most dependent on humans and is the most common is the:
 - a. Roof rat
 - b. Norway rat
 - c. Prairie dog
 - d. Ground squirrel
2. Which cockroaches are commonly found in sewer lines and in damp and dirty basements?
 - a. Oriental and American cockroaches
 - b. German and Brown-banded cockroaches
 - c. Brown and Australian cockroaches
 - d. Smoky-brown and Oriental cockroaches
3. The most important factor in the control of cockroaches is:
 - a. Selection of the proper dispersal equipment
 - b. Correct timing of applications
 - c. Sanitation
 - d. Selection of the correct insecticide
4. Effective control of cat or dog fleas can only be achieved if:
 - a. The outside and underside of the house are treated
 - b. The animals and premises are treated at the same time
 - c. Outdoor residual treatment is carried out
 - d. The animals are sprayed or dipped with the proper insecticide

F. CATEGORY 8.. PUBLIC HEALTH PEST CONTROL

1. Which one of the diseases, below, is transmitted to man through infected bird droppings?
 - a. Typhus fever
 - b. Arthropod-borne encephalitis
 - c. Histoplasmosis
 - d. All of the above
2. The vector responsible for the transmission of plague and murine typhus is the:
 - a. German cockroach
 - b. Oriental rat flea
 - c. House mouse mite
3. In a plague endemic area your initial control measures should be directed against the:
 - a. Rodents
 - b. Wild birds
 - c. Ectoparasites
4. Why should an insecticide dust be used in a rodent control program?
 - a. To kill the fleas carried by rats
 - b. To increase the rat killing power of poisoned baits
 - c. Many insecticides are effective rodent killers
 - d. Dusts are more toxic to fleas
5. The primary consideration in housefly control is:
 - a. Residual spray
 - b. Use of aerosols
 - c. Sanitation

- d. Malathion sugar baits
6. The most important disease transmitted by mosquitoes in the United States is:
- a. Plague
 - b. Encephalitis
 - c. Malaria
 - d. Dog heartworm
7. Which of the following possible control methods would be the proper choice for efficient mosquito control in a pond used for recreational fishing and boating?
- a. Standing water should be eliminated by drainage or filling
 - b. Pond should be stocked with mosquito feeding fish
 - c. ULV application should be made on a weekly basis
 - d. Mosquito larvicides should be applied on biweekly basis
8. If you are sent to the housing area on post to control Aedes aegypti, the yellow fever mosquito, which of the following techniques would be most effective?
- a. Ditching and filling breeding sites
 - b. ULV spraying of the area
 - c. Emptying and removing artificial containers
 - d. Dusting the breeding sites

Page size (DD Form 1826)

The image shows the front of a DD Form 1826, titled "The Department of Defense Certificate of Competency". At the top, the text "The Department of Defense" is written in a large, stylized, black serif font, arched over a circular seal. The seal features an eagle with wings spread, perched on a shield, with the words "DEPARTMENT OF DEFENSE" and "UNITED STATES OF AMERICA" around the border. Below the seal, the title "Certificate of Competency" is written in a large, bold, black serif font. Underneath the title, the text "is Awarded to" is written in a smaller, italicized, black serif font. To the left of this text is a line for "Certificate No." and to the right is a line for "Expiration Date". Below "is Awarded to", the text "in Recognition of the Completion of Requirements for Certified Applicator in the following Pest Control Categories" is written in a smaller, italicized, black serif font. Further down, the text "as prescribed by Department of Defense Standards" is written in a smaller, italicized, black serif font, followed by "This Certificate authorizes the recipient to select and apply pesticides" in a smaller, italicized, black serif font. At the bottom, there are three lines for signatures: "Certifying Official", "Date", and "Commanding Officer". In the bottom left corner, the text "DD FORM 1826" is printed in a small, black, sans-serif font.

Figure D-3-1. DD Form 1826, "DoD Certificate of Competency"

Wallet size (DD Form 1826-1)

The image shows the front side of a wallet-sized certificate titled "PESTICIDE APPLICATOR". At the top left is the Department of Defense seal. The title "PESTICIDE APPLICATOR" is in bold blue letters. Below the title, it says "Certificate No. _____ is awarded to _____". A horizontal line follows. The text continues: "as CERTIFIED PESTICIDE APPLICATOR in the pest control categories indicated on the reverse as prescribed by Department of Defense standards. This certificate authorizes the recipient to select and apply pesticides." At the bottom, there are two lines: "Expiration Date" and "Certifying Official". In the bottom left corner, it says "DD Form 1826-1 80 NOV".

Figure D-3-2. DD Form 1826-1, "Pesticide Applicator" (Front side)

The image shows the back side of the certificate, titled "PEST CONTROL CATEGORIES" in bold blue letters. Below the title is the instruction "(Line out invalid categories)". A list of 11 categories follows, each preceded by a number and a letter: 1a. Agricultural - Plant, 1b. Agricultural - Animal, 2. Forest, 3. Ornamental and Turf, 4. Seed Treatment, 5. Aquatic, 6. Right-of-Way, 7. Industrial, Institutional, Structural, and Health-Related, 8. Public Health, 9. Regulatory, 10. Demonstration and Research, 11. Aerial Application.

Figure D-3-3. DD Form 1826-1, continued

MINIMUM CURRICULUM REQUIREMENTS FOR DOD
NON-FIFRA CERTIFICATION
AND RECERTIFICATION TRAINING

A. MINIMUM CURRICULUM REQUIREMENTS FOR CORE TRAINING

<u>TITLE</u>	<u>HOURS REQUIRED</u>
1. Introduction to DoD IPM	0.5
2. Laws, Regulations, and Reporting Requirements	5.0
a. Federal and Host-Nation Laws Regulating Pesticide Use	
b. DoD Documents	
c. The Label and Labeling	
d. Records and Reports	
3. Pesticide Calculations	6.0
4. Pesticide Safety	9.0
a. Harmful Effects	
(1) To the Applicator	
(2) To the Environment	
(3) Areas of Special Concern	
(a) Groundwater	
(b) Rare and Endangered Species	
b. Protecting the Applicator	
(1) Programs for the Protection of Pesticide Applicators	
(2) Personal Protective Equipment (PPE)	
(3) Medical Response to Pesticide Poisoning	

c. Protecting the Environment	
(1) Preventing Spills	
(a) Mixing and Loading	
(b) Pesticide Transportation	
(c) Pesticide Storage	
(2) Spill Remediation	
(3) Pesticide Disposal	
(4) Equipment Calibration	
d. The Pest Management Shop	
5. Introduction to Pests	4.0
6. Integrated Pest Management	9.5
a. Introduction	
b. Nonchemical Methods	
(1) Cultural Management and Biological Management	
(2) Genetic Management	
(3) Regulatory Management	
(4) Mechanical and Physical Management	
c. Chemical Methods	
(1) Attractants	
(2) Repellents	
(3) Plant Growth Regulators	
(4) Pesticides	
(a) Defining Pesticides	

(b) Modes of Entry	
(c) Families of Pesticides	
(d) Formulations	
(e) Selecting Pesticides and Formulations; Case Studies	
d. Addressing Unsuccessful Pest Management Programs	
(1) Reviewing Nonchemical Elements of the Program	
(2) Reviewing Selection and Application of Pesticides	
(3) Pesticide Resistance	
e. IPM Case Studies	
7. Equipment Overview	1.5
8. Administrative Procedures (Reviews and Competency Exams; etc.)	4.5
TOTAL HOURS = 40.0	

B. RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR COMBINED TRAINING IN CATEGORY 2., “FOREST PEST CONTROL”; CATEGORY 3., “ORNAMENTAL AND TURF PEST CONTROL”; CATEGORY 5., “AQUATIC PEST CONTROL”; AND CATEGORY 6., “RIGHT-OF-WAY PEST CONTROL”

<u>TITLE</u>	<u>HOURS REQUIRED</u>
1. Introduction to Nonchemical Integrated Vegetation Management	1.0
2. Plant Biology and Physiology	1.0
3. Plant Health Maintenance Programs; Ornamental and Turf	3.0
4. Classification, Use and Mode of Action of Herbicides, Fungicides, and Nematicides . .	3.0
5. Health Hazards of Herbicides, Fungicides, and Nematicides	1.0
6. Diseases of Turf, Ornamentals, and Trees; and Nematode Management	3.0
7. Pests of Turf, Trees, and Ornamentals	3.0
8. Aquatic Weeds; Identification and Management	1.5
9. Natural Resources Conservation Program	2.0
10. Pesticide Use Problems	4.0
11. Forest Pest Management	0.5
12. Vegetation Management Equipment	3.0
13. Administrative Procedures (Reviews and Competency Exams; etc.)	6.0
TOTAL HOURS = 32.0	

(OCONUS PMCs, following coordination with OCONUS certifying officials and training centers may modify the curriculum based on regional pest management objectives.)

C. MINIMUM CURRICULUM REQUIREMENTS FOR TRAINING IN SUBCATEGORY 3.a., “SOIL FUMIGATION”

Soil Fumigation (Besides the 32-hour combined category 2., 3., 5., and 6. training)	4.0
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D. RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR COMBINED TRAINING IN CATEGORY 7., “INDUSTRIAL, INSTITUTIONAL, STRUCTURAL, AND HEALTH-RELATED PEST CONTROL”; AND CATEGORY 8., “PUBLIC HEALTH PEST CONTROL”

<u>TITLE</u>	<u>HOURS REQUIRED</u>
1. Fleas	2.0
2. Cockroaches	2.5
3. Stored Products Pests	2.5
4. Ticks and Mites	2.0
5. Flies other than Mosquitoes	3.0
6. Mosquitoes	4.0
7. Venomous Animals	1.0
8. Vertebrate Pests	1.5
9. Rodents	2.0
10. Equipment	12.0
11. Ants	1.0
12. Other Household Pests	0.5
13. Wood Preservation	1.0
14. Other Wood Destroying Organisms	2.0
15. Termites	5.0
16. Administrative Procedures (Reviews and Competency Exams; etc.)	6.0
TOTAL HOURS = 48.0	

OCONUS PMCs, following coordination with OCONUS certifying officials and training centers may modify the curriculum based on regional pest management objectives.

¹Topics 1. through 16. are required for category 7.

²Only topics 1. through 12. and 4.0 hours administrative time are required for category 8.

E. MINIMUM CURRICULUM REQUIREMENTS FOR TRAINING IN SUBCATEGORY 7.a.,
“STORED PRODUCTS FUMIGATION”

Stored Products Fumigation (Besides the 48-hour combined category 7. and 8. training) . 4.0

F. RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR NON-FIFRA RECERTIFICATION TRAINING IN CORE

<u>TITLE</u>	<u>HOURS REQUIRED</u>
1. Environmental Protection, and IPM	
2. Pesticide Safety	
3. Pesticides	
4. Laws, Labels, and Labeling	
5. Formulations, Calculations, and Applications	
6. Records	
7. Equipment	
8. Administrative Procedures (Reviews and Competency Exams; etc.)	
TOTAL HOURS = 9.0	

G. MINIMUM CURRICULUM REQUIREMENTS FOR NON-FIFRA RECERTIFICATION TRAINING IN CATEGORIES 2., 3., 5., and 6. (COMBINED)

<u>TITLE</u>	<u>HOURS REQUIRED</u>
1. Plant and Turf Diseases	
2. Insect Pests of Plants	
3. Vegetation Management (Weeds and Aquatics)	
4. Seminar and/or Problems, and Discussion	
5. Administrative Procedures (Reviews and Competency Exams; etc.)	

TOTAL HOURS = 9.0

H. RECOMMENDED MINIMUM CURRICULUM REQUIREMENTS FOR NON-FIFRA
RECERTIFICATION TRAINING IN CATEGORIES 7. AND 8. (COMBINED)

<u>TITLE</u>	<u>HOURS REQUIRED</u>
1. Household Pests ^{1,2,3}	
2. Stored Products Pests ^{1,2,3}	
3. Ticks and Mites ^{1,2,3}	
4. Mosquitoes ^{1,2,3}	
5. Flies other than Mosquitoes ^{1,2,3}	
6. Venomous Organisms ^{1,2,3}	
7. Rodents ^{1,2,3}	
8. Other Vertebrates ^{1,2,3}	
9. Termites ^{1,2}	
10. Other Wood Destroying Organisms ^{1,2}	
11. Wood Preservation ^{1,2}	
12. Stored Products Fumigation ²	
13. Administrative Procedures (Reviews and Competency Exams; etc.) ^{1,2,3}	

TOTAL HOURS = 9.0

¹Topics 1. through 11. and 13. are required for category 7., "Recertification."

²Topics 1. through 13. are required for category 7.a., "Recertification."

³Topics 1. through 8. and 13. are required for category 8., "Recertification."

PROCEDURES FOR ISSUING DOD CERTIFICATES
FOR PESTICIDES APPLICATORS

A. Certificates shall be issued to pest management personnel by the designated certifying official on determination that the candidate has successfully completed certification requirements. Installation civilian and local national pesticide applicator personnel must successfully pass the core and one or more of the Non-FIFRA pest control categories and apprenticeship requirements to be issued a "DoD Certificate of Competency" by the designated certifying official. When individuals have completed initial formal training at one of the training centers, the officer in charge of the training center shall provide an identification number for the certificate. To identify certified personnel, a numbering system shall be used in the issue of either certificate (DD Form 1826, 8 ½" X 11," or DD Form 1826-1, wallet size). Examples are provided in Attachment 3 to Appendix D, above.

B. Certificate numbers shall contain three or four elements, as follows:

1. The first, consisting of two or three letters, is a designation of where the individual was originally trained. The designations are, as follows:

- a. OA - U.S. Army AMEDD Center and School, Fort Sam Houston, TX
- b. OAE - U.S. Army CHPPM Europe
- c. OAF - 366TH Training Squadron, Sheppard Air Force Base, TX
- d. ONJ - Navy Disease Vector Ecology and Control Center, Jacksonville, FL
- e. ONB - Navy Disease Vector Ecology and Control Center, Bangor, WA

2. The second element is a sequential three-digit number assigned by the initial training center.

3. The third is a two-digit number indicating the calendar year in which initial certification was received.

4. The fourth element is a four-digit number indicating the month and calendar year of current recertification. That element is not required on certificates for pesticide applicators during their first 3 years of DoD certification. As an example, the certificate number OAE-001-77-0179 indicates that the certificate holder was initially certified at the Army school at U.S. Army CHPPM- Europe; was the first person certified by that center in 1977; and was recertified in January 1979.

C. The words, "NON-FIFRA CERTIFICATION" shall precede the listing of certification categories on each DD Form 1826 and 1826-1 issued for Non-FIFRA certification. Categories of certification shall be indicated on each certificate. On the DD Form 1826, the pest control

certification categories shall be listed. On the DD Form 1826-1, the wallet certificate, invalid categories shall be lined out before issue. Where facilities are available, it is desirable to laminate the wallet certificates after completion.

D. Wallet-size certificates (DD Form 1826-1) shall be issued bearing the same information as the full-size certificates (DD Form 1826). Certified individuals shall carry those cards while in the performance of their duties.

E. Certificate numbers vacated by revocation, resignation, or for any other reasons shall not be reissued.

F. Certificates shall bear the name of the individual without any additional titles. In situations where it is desirable to identify the certified individual as a “pest control inspector,” or “planner-estimator,” a standard recognition form shall be used.

G. Certificates shall expire 3 years from the last day of the month in which the certificate is issued. The certifying official may extend an individual's certification for cause on a one time basis for a period of not more than 6 months.

H. A current list of certifying officials shall be maintained by the Component senior PMC and the AFPMB.

APPENDIX E

DOD PEST MANAGEMENT TRAINING AND CERTIFICATION CENTERS

DoD Training Centers providing pest management training and certification are, as follows:

U. S. Army AMEDD Center and School
ATTN: MCCS-PM
Fort Sam Houston, TX 78234-6142

Center for Health Promotion and Preventive Medicine-Europe
ATTN: MCHB-EN
CMR 402
APO AE 09180

Navy Disease Vector Ecology and Control Center, Bangor
19950 Seventh Avenue, NE, Suite 201
Poulsbo, WA 98370-7045

Navy Disease Vector Ecology and Control Center
Naval Air Station, Box 43
Jacksonville, FL 32212-0043

Atlantic Division
NAVFACENGCOM
1510 Gilbert Street
Norfolk, VA 23511-6287

Naval Facilities Engineering Command Headquarters
200 Stovall Street
Alexandria, VA 22332-2300

Pacific Division
NAVFACENGCOM
Pearl Harbor, HI 96860-7300

366th Training Squadron
727 Missile Road
Sheppard AFB, TX 76311-2254

910 AG/DOS (FIFRA Pest Control Category 11 only)
3976 King Graves Road
Youngstown-Warren Regional Airport
Air Reserve Station, Vienna, OH 44473-0910